

R E M A R K S

The specification has been amended to correct the error noted by the Examiner at p. 42. A marked-up copy of the corrected paragraph, headed "Version with markings to show changes made," is attached hereto.

All claims to nonelected inventions II and III have been cancelled, without prejudice to their presentation in one or more divisional applications. The election of Invention I (claims 1 - 16) is thereby affirmed. Since this Amendment does not increase either the total number of claims or the number of independent claims, no additional fee is necessary.

Claims 1 - 16 are in the application. No claim has been allowed.

The informality at p. 42, lines 1-3 (incomplete sentence), has been corrected by replacing the paragraph beginning at p. 41, line 19, with a new paragraph.

In response to the objection to claims 6 - 8 and 13 - 16, attention is directed to the fact that neither these claims, nor any other claims in the application, are multiple dependent claims. Therefore, the objection is inapposite; withdrawal is respectfully requested.

With reference to the rejection of claim 1 under 35 U.S.C. §102(a) as anticipated by the Abstract of Japanese patent publication 9-95633 (Yoshimura `633), applicants submit that the medium of the present invention is different from the ink composition of Yoshimura `633 in mechanism. The ink composition of Yoshimura `633 is colorless unless heat is applied thereto. When the ink composition is heated, the ink colors, and in addition, the color tone gradually changes with lapse of time (i.e., the ink composition starts to function as a heat history indicator). In contrast, in the present invention the medium is preliminarily heated to be colored. By applying dotted heat or patterned heat to the colored medium, the color erasing agent

therein melts, thereby starting the heat history function of the medium. Namely, insofar as ether alcohols may be used as color erasing agents in the medium of the present invention, the ether alcohols have to remain in the medium without evaporating.

In Yoshimura '633, the ether alcohols are used to dissolve the coloring component included in the ink composition, and the ether alcohols are not included in the final product (i.e., the ink layer) because it is described in page 5, paragraph [0048] of the specification of Yoshimura '633 that "it is needed for the ether alcohols to have such a volatility as to evaporate in a short period of time after the ink is printed."

Consequently, the ether alcohols used in Yoshimura '633 (1) are not "a color erasing agent having a function to discolor the color forming component in the colored state," as applicants' claim 1 requires, and (2) are not even present in the final product, as claim 1 further requires. It follows that Yoshimura '633 does not anticipate claim 1.

Turning to the rejection of claims 1- 5, 9 - 11 and 12 under 35 U.S.C. §102(b or §103(a) as anticipated by or unpatentable over Asano et al., the Examiner notes that Asano et al. mentions phthalic acid esters among the "micro-encapsulated hydrophobic organic compounds" that may be used in the indicator of the patent, and that the present specification (at p. 31) states that phthalic acid esters are among "color erasing agents having supercooling properties."

In Asano et al., however, the phthalic acid esters are used as a color developer. If the phthalic acid esters have a color erasing function, the resultant ink composition does not have the heat history function. It is to be noted that not all phthalic acid esters have a color erasing function.

Thus, the hydrophobic organic compounds of Asano et al. cannot be color erasing agents for the particular color forming component there used. Asano et al. clearly teaches that the function of the organic compound is to melt at a control temperature, and (by diffusing out) to bring a methine dye into contact

with an oxidizing material, thereby causing an irreversible color development of the methine dye. If the organic compound were a color erasing agent for the color forming component of Asano et al., the color development would not be irreversible.

In contrast, present claim 1 recites the combination of "a color forming component" and "a color erasing agent having a function to discolor the color forming component [i.e., the particular color forming component with which it is combined] in the colored state." As stated, Asano et al. does not disclose any combination of a color forming component with a color erasing agent for that same color forming component, as applicants' claim 1 requires. Equally, Asano et al. would not make such a combination obvious, since it would be inconsistent with the intended irreversible color development in the Asano et al. device.

It is therefore submitted that claim 1, and claims 2 - 16 dependent thereon, distinguish clearly and patentably over Asano et al. by virtue of the recital, in claim 1, of the aforesaid combination of component and erasing agent.

For the foregoing reasons, it is believed that this application is now in condition for allowance. Favorable action thereon is accordingly courteously requested.

Respectfully,

Christopher C. Dunham
Christopher C. Dunham
Reg. No. 22,031
Attorney for Applicant
Tel. (212) 278-0400

I hereby certify that this paper is being deposited this date with the U.S. Postal Service as first class mail addressed to Assistant Commissioner for Patents, Washington, D.C. 20231.

Christopher C. Dunham
Christopher C. Dunham, Reg. No. 22,031

Date JUNE 13, 2002

Serial No.: 09/268,194

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

Page 41, the paragraph beginning at line 19 has been amended as follows:

--The temperature history medium of the present invention may include a backcoat layer on the side of a substrate which is opposite to the side on which the color forming layer and color erasing layer are formed. The backcoat layer is formed, for example, by coating a coating liquid mainly including an emulsion of hydrophobic polymers or water-soluble polymers which serves as a binder resin. Suitable resins for use as the binder resin in the backcoat layer include resins mentioned above for use in the protective layer or the undercoat layer. In addition, the backcoat layer may contain auxiliary agents such as non-foaming fillers, waterproof applying agents, waxes and the like.--